SMART
Journal of Business Management Studies

(A Professional, Refereed, International and Indexed Journal)

A SERIAL OF SCIENTIFIC MANAGEMENT AND ADVANCED RESEARCH TRUST

Vol-11 Number- 2 July - December 2015 Rs. 400

ISSN 0973-1598 (Print) ISSN 2321-2012 (Online)

Professor MURUGESAN SELVAM, M.Com, MBA, Ph.D
Founder - Publisher and Chief Editor

SCIENTIFIC MANAGEMENT AND ADVANCED RESEARCH TRUST
(SMART)

TIRUCHIRAPPALLI (INDIA)
www.smartjournalbms.org

SMART JOURNAL OF BUSINESS MANAGEMENT STUDIES
(A Professional, Refereed, International and Indexed Journal)
www.smartjournalbms.org

DOI : 10.5958/2321-2012.2015.00008.1

Title of the Book

CAPITAL IN THE TWENTY-FIRST CENTURY

Authored by

Thomas Piketty in French and translated by **Arthur Goldhammer** into English
Cambridge (England): The Belknap of Harvard University Press, April 2014,
(ISBN 978-0-674-43000-6), pp.452, $39.95 (Hard Cover).

Reviewed by

S.Iyyampillai
Senior Professor of Economics, Bharathidasan University, Tamil Nadu, India
E- Mail ID: Email:sipillai@yahoo.com

JEL Code: M3

1. Introduction

Changes in the structure of capital, its ownership and their impact on economy and society are changing. These changes and their consequences in eight developed countries – four European countries (France, Britain, Germany, Italy), two American Countries (United States of America and Canada), one Asian country (Japan) and Australia – for the period from 1700 to 2013, have been traced by Thomas Piketty [Founder Director of Paris School of Economics, France], in his book titled, "Capital in the Twenty-First Century", published by Harvard University Press, Cambridge, 2014. As per this study, the ownership of capital has shifted in the last 300 years from Nature to State and then from State to Private Hands. Larger proportion of private ownership of land, increasing proportion of finance capital and recently of internet capital and rising flow of wealth from parents to children [called patrimonial capitalism] are some of the predominantly emerging trends. Excepting the period from 1900 to 1950 (I World War, Great Depression and II World War), all through the period from 1700, the share of capital in national income (NI) and capital as a proportion of national income have been almost constant. Other major findings are also listed out.

Many studies have attempted to understand the major sources of economic development (**Malthus 1798, Ricardo 1817, Marx 1867, Mishan 1967, Hicks 1969, Bhagwati 1970, Schumacher 1973, Roxborough 1979 and Sengupta 2001**). The importance of human resource, capital, entrepreneurial abilities and formal & informal institutions has been emphasized by many of them. As the development takes place, the qualities as well as the significance of those factors go on changing. Thus structural changes have become unavoidable and these changes would have definite impact on the distribution of income, volume of income and wealth inequalities and social & environmental imbalances. With this background understanding, Thomas Piketty (2014) has made an attempt to trace the structural changes and their implications on income and wealth distributions in eight developed countries, by using the statistics available since 1700 AD.

2. Methodology Adopted in the Book

The relationship between capital and size of NI is measured by two ratios, namely, alpha and beta. Alpha refers to the capital's share in NI, which is roughly 30 to 40 per cent. Beta refers to the ratio of capital to NI (normally six years of national income equals the value of capital).

The relationship between rate of return and growth rate of NI has also been assessed, (which can be called gamma). **Gamma** refers to g/r where 'g' refers to growth rate of NI and 'r' refers to rate of return (Gamma is generally less than one). When the 'r' [rate of return] exceeds the 'g' [growth rate of NI], then it logically follows that inherited wealth grows faster than output and income. The inherited wealth will dominate wealth amassed from a lifetime's labour by a wide margin. When the individual's initial capital endowment is higher, the average effective rate of return on capital may be higher. Though there are forces of convergence, the forces of divergence can at any point regain the upper hand, as seems to be happening now, at the beginning of the 21st century. Thus in Piketty's view, divergence is not perpetual and is only one of several possible future directions for distribution of wealth. The fundamental r > g inequality is the main force of divergence but it has nothing to do with any market imperfection. On the contrary, the more perfect the capital market [in the economists' sense], the more likely 'r' is to be greater than 'g'. For countering this, Piketty suggests a progressive Global, Tax on capital, which requires a considerable degree of international coordination and which is not quite likely.

3. Major Concepts Used in the Book

3.1 National Income is defined as the sum of all income available to the residents of a given country in a given year, regardless of the legal classification of that income.

3.2 Capital is defined as the sum total of nonhuman assets that can be owned and exchanged on some market. Capital includes all forms of real property (including residential real estate) as well as financial and professional capital (plants, infrastructure, machinery, patents, and so on) used by firms and government agencies. Since the human capital cannot be owned by another person or traded on a market, human capital is excluded from capital. Piketty uses the words 'capital' and 'wealth' interchangeably. It would be better to reserve the word 'capital' to describe forms of wealth accumulated by human beings (buildings, machinery, infrastructure etc.) and therefore, to exclude land and natural resources, with which humans have been endowed without having to accumulate them. Land could be a component of wealth but not capital. The problem is that it is not always easy to distinguish the value of buildings from the value of land on which they are built. And even greater difficulty is that it is hard to gauge the value of 'virgin' land (as humans found it centuries or millennia ago) apart from improvements due to human intervention. Gold can also be considered as wealth.

3.3 National Wealth or National Capital is the total market value of everything owned by the residents and government of a given country at a given point in time, provided it can be traded on some market. Government debt is an asset for the private sector and a liability for the public sector; and therefore nets out to zero. Thus,

National Capital = farmland + housing + other domestic capital + net foreign capital. National capital was worth about seven years of NI in Britain in 1700 (including four in agricultural land). It was worth almost seven years of NI in France in 1910 (including one invested abroad).

3.4 Domestic Capital measures the value of the capital stock (buildings, firms etc.) located within the territory of the country in question. Domestic capital is broken into three categories: farm land, housing (including the value of the land on which buildings stand), and other domestic capital in the form of buildings used for business, infrastructure, machinery, computers, patents etc. These assets are evaluated in terms of market value.

3.5 Price of Capital is in part a social and political construct and it reflects each society's notion of property and depends on the many policies and institutions that regulate relations among different social groups and especially between those who own capital and those who do not. For example, *real estate prices depend on laws regulating the relations between landlords and tenants and controlling rents. These laws also affect stock market prices*. The market value of a company listed on the stock exchange is its stock market capitalization. For companies not so listed, either because they are too small or because they choose not to finance themselves via stock market (perhaps in order to preserve family ownership), the market value is calculated for national accounting purposes with reference to observed stock prices for listed firms as similar as possible to the unlisted firm. To measure the stocks of private wealth and national wealth, here market values are used. The accounting value of a firm, also called book value or net assets or own capital, is equal to the accumulated value of all assets – buildings, infrastructure, machinery, patents, vault cash and so on - included in the firm's balance sheet less the total of all outstanding debt. In theory, in the absence of all uncertainty, the market value and book value of a firm should be the same. Hence the **Tobin's Q** ***(i.e., the ratio between market value and book value of corporations, has risen in rich countries since 1970s-1980s)*** should be equal to 1 or 100 percent. This is normally the case when a company is created. The difficulty arises from the fact that anticipating the future of the firm quickly becomes more complex and uncertain. After a certain time, no one is really sure whether the investment made (say Rs.10 crore) several years earlier is really economically useful to the firm. In such a situation, the book value may diverge from the market value. If certain immaterial investments (such as expenditure to increase the value of brand or for research and development) are not counted on the balance sheet, then it is logical for the market value to be structurally greater than the book value. ***The price of capital always depends on national rules and institutions.***

3.6 Net Foreign Capital (or net foreign assets) is the difference between the assets owned by residents of the country in the rest of the world and assets owned by the rest of the world in the country in question (including the assets in the form of government bonds).

3.7 Immaterial Capital such as patents and other intellectual property are defined as financial assets (if individuals hold patents directly or individuals own shares of a corporation that holds patents).

3.8 Public Wealth and Private Wealth

Whether public or private, capital is always defined as net wealth, that is, the difference between the market value of what one owns (assets) and what one owes (liabilities or debts).

3.9 Public Nonfinancial Assets include public buildings, schools, universities, hospitals, provision of public services, government offices. It is not easy to set a precise market value on public buildings [such as schools and hospitals] or transportation infrastructure [railway lines and highways] since these are not regularly sold. In theory, such items are priced by observing the sales of similar items in the recent past but such comparisons are not always reliable, especially since market prices frequently fluctuate. Hence these figures should be taken as rough estimates. **Public Financial Assets** include the shares [of foreign or domestic firms] owned by governments.

3.10 Durable Goods and Valuables

Household purchases of durable goods (furniture, appliances, automobiles etc.) are not included in private wealth. They are treated as items of immediate consumption (by international standards for national accounting). They incur high rate of annual depreciation. They form very small proportion of total wealth. Furniture, refrigerators and cars form half a year's income. According to the international standards, national accounts include such nonfinancial assets as gold, silver, jewelry, precious metals under 'valuables' since they are used as reservoir of value and since they deteriorate very little. The value of such goods is around 10 to 15 percent of national income in 19^{th} and 20^{th} centuries. Overall private wealth forms 5 to 6 years of NI and half of which is in the form of real estate and half in net financial assets (bank deposits, stocks, bonds, net of debt).

3.11 Land Values

Piketty's book considers only those forms of capital that can be accumulated. It does not take account of the value of pure natural resources, including 'pure land', that is, land prior to any human improvements. Pure land constitutes only a small part of national capital (at most one year of national income). It is very difficult to say precisely what portion of its value represents "pure land value" prior to any human exploitation and what corresponds to the many investments in and improvements to this land over the centuries (including clearing, drainage, fencing etc.). Land and government bonds raise very different issues and should not be added together. Government bond is nothing more than a claim of one portion of the population (those who receive interest) on another (those who pay taxes) and it should therefore be excluded from national wealth and included solely in private wealth.

4. Background in the 19^{th} Century

Intellectual and political debate about the distribution of wealth had long been based on an abundance of prejudice and paucity of data and facts. Films, literature and novels of 19^{th} century especially were full of detailed information of relative wealth and living standards of different social groups and especially about the deep structure of inequality, the way it was justified and its impact on individual lives. For instance, the novels by Jane Austen (1811, 1813, 1815 and 1818) were of that type. They grasped the hidden contours of wealth and its inevitable implications for the lives of men and women. Jane Austen and other novelists depicted the effects of inequality with a verisimilitude and evocative power that no statistical or theoretical analysis can match. Indeed, the distribution of wealth is an important issue not only for economists, sociologists, historians and philosophers but also for everyone.

There are different views about the degree of inequality. Some people believe that inequality is always increasing, while others feel that the inequality is naturally decreasing. Each group justifies its own intellectual laziness by pointing to the laziness of the other. Hence there is a role for research which could be at least systematic and methodological, if not fully scientific. Intellectuals including social scientists, could raise right questions and democratic debate by patiently searching for facts and patterns and calmly analyzing the economic, social and political mechanisms.

For **Malthus (1798),** the primary threat was population. He believed that the unprecedentedly rapid population growth contributed to a stagnation of agricultural wages and an increase in land rents and to the growing unpopularity of the aristocracy and the then existing political regime. Malthus in 1798, wrote the book "Essay on the Principle of Population", being primarily influenced by the travel diary published by Arthur Young, an English agronomist, who travelled extensively in France and wrote of the poverty of the French countryside.

Marx (1867) believed in the 19th century that the dynamics of private capital accumulation would lead to the concentration of wealth in fewer hands. Marx published "The Communist Manifesto" in 1848. The first chapter of this book began with the famous words, "A specter is haunting Europe – the specter of communism". The text ended with: "The development of modern industry, therefore, cuts from under its feet the very foundation on which the bourgeoisie produces and appropriates products. What the bourgeoisie therefore produces, above all, are its own gravediggers. Its fall and the victory of the proletariat are equally inevitable". Marx totally neglected the possibility of durable technological progress and steadily increasing productivity. He no doubt lacked the statistical data needed to refine his predictions. Evidently he wrote in a great political fervor, which at times led him to issue hasty pronouncements from which it was difficult to escape. (That is why economic theory needs to be rooted in historical sources that are as complete as possible). In this respect, Marx did not exploit all the possibilities available to him. Despite these limitations, Marx's analysis remains relevant in several respects. The very high level of private wealth that has been attained since the 1980s and 1990s in the wealthy countries of Europe and in Japan, measured in years of NI, directly reflects the Marxian logic.

Kuznets (1966) thought in the 20th century that the balancing forces of growth, competition, and technological progress would lead in later stages of development to reduced inequality and greater harmony among the classes. They are based on much more extensive historical and comparative data than were available to previous researchers (**Piketty, 2014**).

In the 19th century as well as in the 20th century, the rate of return on capital (r) exceeded the rate of growth of output and income (g). Under such circumstances, capitalism automatically generated arbitrary and unsustainable inequalities that radically undermined the meritocratic values on which democratic societies were based (**Piketty, 2014**).

Ricardo and Marx were surely the two most influential economists of the 19th century. They believed that a small social group –landowners for Ricardo and industrial capitalists for Marx – would inevitably claim a steadily increasing share of output and income. For **Ricardo (1817),** the chief concern was the long-term evolution of land prices and land rents. Once both population and output begin to grow steadily, land tends to become increasingly scarce relative to other goods and hence, the price of land as well as the rents paid to the landlords would rise continuously.

By the time **Marx** published the first volume of **Capital** in 1867, fifty years after the publication of **"On the Principles of Political Economy and Taxation, "** by **Ricardo,** economic and social realities had changed profoundly. The most striking fact of the day was the misery of the industrial proletariat. Workers crowded into urban slums. The working day was long and wages were very low. A new urban misery emerged, more visible and more shocking. The books published in France in 1840 described some cases of child labour in factories.

The book by **Engels (1845)** also described the same sordid reality.

4.1 The Growth of Communism

The data assembled by **Piketty (2014**) reveal no structural decrease in inequality prior to World War I (as well as after II World War). Inequality at an extremely high level got stabilized in the period from 1870 to 1914, with marked increase in concentration of wealth. In the 1840s, the industrial profits grew while labour income stagnated. It was in this context that the first communist and socialist movements developed. After 50 years of industrial growth, the condition of the masses was still just miserable as before.

Marx (1867), like Ricardo, based his work on an analysis of the internal logical contradictions of the capitalist system. Marx took the Ricardian model of the price of capital and the principle of scarcity as the basis of the analysis of the dynamics of capitalism. Here capital was primarily industrial (machinery, plant, etc.) rather than landed property, so that in principle, there was no limit to the amount of capital that could be accumulated. Marx's principal conclusion was the "principle of infinite accumulation", that is, the inexorable tendency for capital to accumulate and become concentrated in ever fewer hands, with no natural limit to the process. **Marx** predicted that either the rate of return on capital (r) would steadily diminish (thereby killing the engine of accumulation and leading to violent conflict among capitalists) or capital's share of national income (alpha) would increase infinitely (which sooner or later would unite the workers in revolt). In either case, no stable socioeconomic or political equilibrium was possible.

4.2 From Marx to Kuznets

Malthus, Ricardo, Marx and many others had been talking about inequalities for decades without citing any source whatsoever or any methods for comparing one era with another or deciding between competing hypotheses. The Kuznets' works contained sources and methods in the most minute detail. **Kuznets** noted a sharp reduction in income inequality in the USA between 1913 and 1948 (with First World War, Great Depression and Second World War). According to Kuznets' theory, income inequality would automatically decrease in advanced phases of capitalist development. The philosophy was summed up in a single sentence: "Growth is a rising tide that lifts all boats". In 1954, at the meeting of the American Economic Association, of which he was the president, he offered a far more optimistic interpretation of his results. His lecture there was published in 1955 under the title, "**Economic Growth and Income Inequality**". "Kuznets' Curve" came to light through this lecture. According to this theory, inequality everywhere can be expected to follow a "bell curve". A similar optimism can also be seen in **Solow's (1956)** analysis of the conditions necessary for an economy to achieve a 'balanced growth path'. However, Kuznets' Curve was criticized as its empirical underpinnings were extremely fragile (Piketty 2014). The sharp reduction in income inequality that was observed in almost all the rich countries between 1914 and 1945 was due to the world wars and the violent economic and political shocks. It had little to do with the tranquil process of inter-sectoral mobility described by **Kuznets**. Since 1970, income inequality has increased significantly in the rich countries. In this context, it is pertinent to list out briefly **the major findings** made by **Piketty** (2014).

5. Major Findings of Piketty

1. One should be wary of any economic determinism regarding inequalities of wealth and income. The history of income and wealth is deeply political, chaotic and unpredictable. How this history plays out depends on how societies view inequalities and what kind of policies and institutions are

adopted to measure and transform them. The history of distribution of wealth has always been deeply political and it cannot be reduced to purely economic mechanisms.

2. In traditional societies, the basis of social inequality and most common cause of rebellion was the conflict of interest between landlord and peasant. The Industrial Revolution exacerbated the conflict between capital and labour because production became more capital intensive than in the past.

3. The reduction of inequality that took place in most developed countries between 1910 and 1950 was above all a consequence of First and Second World Wars and of policies adopted to cope with the shocks of war.

4. The resurgence of inequality after 1980 is largely due to the political shifts of the past several decades, especially with regard to taxation and finance.

5. The history of inequality is shaped by the way economic, social and political actors view what is just and what is not, as well as by the relative power of those actors and the collective choices that result. It is the joint product of all relevant actors combined.

6. The dynamics of wealth distribution reveal powerful mechanisms pushing alternatively toward convergence and divergence.

7. The main forces for convergence are the diffusion of knowledge and investment in training and skills. Knowledge and skill diffusion is the key to overall productivity growth as well as the reduction of inequality both within and between countries.

8. Since over time, production technologies tend to require greater skills on the part of workers, labour's share of income will rise and capital's share will fall. This is called '**rising human capital hypothesis**'.

9. "Nonhuman" capital seems almost as indispensable in the 21st century as it was in the 18th or 19th and it may continue in the future too. There is little evidence that labour's share in NI has increased significantly in a very long time.

10. The ratios mentioned earlier in the Methodology Section indicate that the structural relationship between capital and NI has been almost constant since 1700 till 2013, excepting the period from 1910 to 1950. However, the structure of capital has undergone changes in the reference period and the effects of these changes are many.

11. Lack of adequate investment in training excludes entire social groups from the benefits of economic growth and the top earners quickly separate themselves from the rest by a wide margin, leading to divergence.

12. The principal force for convergence depends largely on educational policies, access to training and to the acquisition of appropriate skills, and associated institutions.

13. The top decile share in US national income dropped from 45 to 50 per cent in the 1910s-1920s to less than 35 per cent in the 1950s (this fall has also been documented by Kuznets) and it then rose to 45-50 per cent in the 2000s-2010s. This spectacular increase in inequality largely reflects a veritable separation of the top managers of large firms from the rest of the population and these top managers by and large have the power to set their own remuneration, in some case without limit and in many cases, without any clear relation to their individual productivity, which in any case is very difficult to estimate in a large organisation.

14. In Britain, France and Germany, aggregate private wealth (real estate, financial assets, professional capital and net debt) was worth about six to seven years of NI in 1910 and between four and six years in 2010. The capital/income ratio fell sharply in response

to the shocks of the period 1914-1945.

15. The nature of capital itself has changed radically (from land and other real estate in the eighteenth century to industrial and financial capital in the twenty-first century).

16. In the developed countries today, the capital/income ratio generally varies between five and six.

17. Private fortunes were prospering in the period from 1870 to 1914. During the period between 1914 and 1945, the prices of real estate and financial assets fell to extremely low levels, so low that private capital seemed to have evaporated. However, the fact that during Great Depression, the governments had no reliable annual estimates of economic output, has also to be kept in mind.

18. From 1900 to 1980, 70 to 80 per cent of the global production of goods and services was concentrated in Europe and America. Europe's Gross Domestic Product (GDP) was 47 per cent of world GDP in 1913, down to 25 per cent in 2012.

19. Europe attained its maximal economic weight on the eve of World War I, when it accounted for nearly 50 per cent of global output. But USA attained its peak in the 1950s, when it accounted for nearly 40 per cent of global output.

20. The global income distribution is more unequal than the output distribution. This is so because the countries with the highest per capita output, are also more likely to own part of capital of other countries and therefore to receive a positive flow of income from capital originating in countries with a lower level of output. For instance, all the major developed countries (like the US, Japan, Germany, France and the UK) currently enjoy a level of NI that is slightly greater than their GDP. The net income from abroad is just about one to two per cent of GDP in the US, France and the UK. On the other hand, the income for Africans is roughly five per cent less than their output. Per capita NI of wealthy countries remains permanently greater than that of the poor countries.

21. According to classical economic theory, the free flow of capital (to underdeveloped countries) would equalize the marginal productivity of capital at the global level and it should lead to convergence of rich and poor countries and eventual reduction of inequalities through market forces and competition. But this optimistic theory has major defects. The equalization mechanism does not guarantee global convergence of per capita income because skill levels and human capital across countries are not equal. The historical experience suggests that the principal mechanism for convergence at the international as well as the domestic level is the diffusion of knowledge, skill, know-how, technology and education. Autarky has never promoted prosperity. Autarky does not encourage technological transfer. Knowledge diffusion depends upon the large-scale investment in education and training of the population, for which efficient government is required.

22. None of the Asian countries that has moved closer to the developed countries of the West in recent years, has benefited from large foreign investments. Some of them have benefited far more from open markets for goods and services and advantageous terms of trade than from free capital flows.

23. The new information economy will allow the most talented individuals to increase their productivity many times. This argument is often used to justify extreme inequalities and to defend the privileges of the winners without much consideration for the losers.

24. The 19th century witnessed the first sustained growth in per capita output, although large segments of the population derived little benefit from this.

25. For industrial goods in the developed countries, productivity growth has been more rapid than for the economy as a whole, so that prices in this sector have fallen relative to the average of all prices. Foodstuff is a sector in which productivity has increased continuously and crucially over the very long run (thereby allowing a greatly increased population to be fed by ever fewer hands, liberating a growing portion of the workforce for other tasks). For such foodstuffs as milk, butter, eggs, and dairy products in general, major technological advances in processing, manufacturing, conservation, and so on led to relative price decreases and thus to increases in purchasing power. Introduction of new goods and spectacular improvements in performance (for example, electronics, computer technology, computers and cell phones) have led to increases in purchasing power. The material conditions of life have clearly improved dramatically since Industrial Revolution, allowing people around the world to eat better, dress better, travel, learn, obtain medical care, and so on.

26. *Economic growth is quite simply incapable of satisfying the democratic and meritocratic hope, which must create specific institutions for the purpose and not rely solely on market forces or technological progress.*

27. *People still do not understand what evil spirit condemned them to such a low rate of growth beginning in the late 1970. Even today many people believe that the last thirty (soon to be thirty-five or forty) "pitiful years" will soon come to an end, like a bad dream, and things will once again be as they were before.*

28. Certain prices, such as those for land, building etc. have been rising to very high levels for a prolonged period of time. This permanently alters the distribution of wealth in favour of those who happen to be the initial owners of those scarce resources.

29. Inflation also plays a fundamental role in the dynamics of the wealth distribution. Indeed, it was essentially inflation that allowed the wealthy countries to get rid of the public debt they owed at the end of World War II. Inflation also led to various redistributions among social groups. Inflation is largely a 20th century phenomenon. Up to World War I, inflation was zero or close to it. French and British currencies remained quite stable for two centuries. In the 19th and early 20th centuries, a Pound Sterling (UK) was worth about 5 Dollars (US), 20 Marks (Germany) and 25 Francs (French).

30. To pay for the World War I of extraordinary violence and intensity, to pay for soldiers and for the ever more costly and sophisticated weapons they used, governments went deeply into debt. As a result, Britain abandoned the gold standard in 1931, the US in 1933, France in 1936. The post-World War II gold standard was established in 1946 and ended in 1971 when the dollar ceased to be convertible into gold.

31. Between 1913 and 1950, inflation in France exceeded 13 per cent per year and in Germany, it was 17 per cent per year. But in the UK and US, which suffered less damage and less political destabilization from the two wars, it was barely three per cent per year in the period 1913-1950.

32. The nature of different types of assets and forms of wealth (land, buildings, machinery, firms, stocks, bonds, patents, livestock, gold, natural resources) has changed radically since the 18th century.

33. The process of financial intermediation (whereby individuals deposit money in a bank, which then invests it elsewhere) has become so complex that people are often unaware of who owns what.

34. The capital/income ratio followed quite similar trajectories in both countries (Britain and France), remaining relatively stable in the 18th and 19th centuries (six and seven years of national income), followed by an enormous shock in the 20th century (2 to 3 years of national income), before returning to levels similar to those observed (6 years worth of national income) on the eve of World War II, resulting in an impressive "U-shaped curve". These very large swings, commensurate with the violent military, political, and economic conflicts, marked the 20th century.

35. Between 1700 and 2010, the relative share of agricultural land had declined and that of housing had increased; that of other domestic capital had been constant; the share of net foreign capital was very little between 1700 and 1850 and after 1920, there was some net foreign capital only between 1850 and 1920. Agricultural land was gradually replaced by buildings, business capital, and financial capital invested in firms and government organisations. The reasons for the collapse in the value of farmland were: a) A rise in the value of housing (this rose three times in the study period) b) An increase in the value of other domestic capital (which rose two times in the study period) c) Increase in the importance of housing both in size and quality d) A substantial accumulation of buildings for business purposes, infrastructure, machinery, warehouses, offices, tools etc. and e) Increase in industrial and financial assets.

36. France was the second most important colonial empire. The net assets of the two countries (Britain and France) owned in the rest of the world increased steadily during the 18th and 19th centuries and attained an extremely high level on the eve of World War I, before literally collapsing in the period 1914-1945 and stabilizing at a low level since then. Between 1880 and 1914, UK and France received significantly more in goods and services from the rest of the world than what they exported (their trade deficits averaged 1 to 2 percent of NI throughout this period). The rest of the world worked to increase consumption by the colonial powers and at the same time, became more and more indebted to those same powers.

37. In 1950s, both France and Britain found themselves with net foreign asset holdings close to zero.

38. The net public wealth in both countries (France and UK) was quite small compared with the total private wealth. *The history of the ratio of national capital to* NI *has largely been the history of the relation between private capital and NI. Private wealth has always dominated the public wealth. In 18 and 19th century Britain, the Government tended at times to increase private wealth by running large public debts. At present, both UK and France are running large public debts.*

39. *UK and France* were frequently at war, both with each other and with other European countries and they did not manage to collect enough taxes to pay for their expenditures and hence public debt rose steeply. Debts were in the order of 50 per cent of NI in the period 1700-1720 and 100 per cent of NI in the period 1760-1770. Interest rate on government bonds was generally around four to five per cent and it was significantly higher than inflation rate and the growth rate. Under such conditions, investing in public debt was a very good business for wealthy people and their heirs.

40. Since rate of inflation was almost zero till the 19th century, sovereign debt was a good investment throughout the 19th century and private investors prospered on the proceeds in France and Britain because they were handsomely reimbursed. However, in the 20th century, debt was drowned by inflation and was repaid with money of decreasing value. Hence in the 20th century, a totally different view of public debt emerged, based on conviction that debt could serve as an instrument of policy aimed at raising public spending and redistributing wealth for the benefit of the least well-off members of society.

41. British public debt was close to 200 per cent of GDP and yet it seemed not to have dried up the flow of private investment or the accumulation of capital. The much feared 'crowding out' phenomenon had not occurred and the increase in public debt seemed to have been financed by an increase in private saving. The fact that the bulk of the public debt was in practice owned by a minority of the population, so that the debt was the vehicle of important internal redistributions when it was repaid as well as when it was not.

42. Faith in private capitalism was greatly shaken by the economic crisis of the 1930. The Great Depression, triggered by the Wall Street Crash of October 1929, struck the wealthy countries with violence and a quarter of the working population in the US, Germany, Britain and France found themselves out of work. The traditional doctrine of 'laissez faire' was discredited. Many countries opted for a greater degree of interventionism.

43. In 1942, Joseph Schumpeter believed that socialism would triumph over capitalism. In 1970, **Samuelson (1972)** was still predicting that the GDP of the Soviet Union might outstrip that of the US sometime between 1990 and 2000. The **"stagflation"** of the 1970s demonstrated the limits of the post-war Keynesian consensus. Waves of nationalization also occurred in many countries. However, the increasing failure of Soviet Union and Chinese models in the 1970s led both communist giants to begin a gradual liberalization of their economic systems in the 1980s. In the context of slower growth, high unemployment, and large government deficits, the progressive sale of publicly held shares was sought after 1990 to bring additional funds into public coffers.

44. In all the developed countries considered here, agricultural land gave way to residential and commercial real estate and industrial and financial capital and urban real estate. Germany amassed substantial foreign assets thanks to trade surpluses. By 2010, Germany's net foreign asset position was close to 50 per cent of NI. However, the total value of capital stock, measured in years of NI, which measures the overall importance of capital in the economy and society appears not to have changed over the long period of time. In the 19th and early 20th centuries, the capital/income ratio was 6 to 7 in Europe compared with 4 to 5 in the US. Private wealth in Europe surpassed US levels. Capital/income ratio returned to historical highs in Europe and it was higher than in the US. Unsurprisingly, the shocks of the 1914-1945 period had affected Europe much more strongly.

45. Fall in the capital/income ratio between 1913 and 1950 could be explained only to a limited extent by the physical destruction of capital (buildings, factories, infrastructure, etc.) due to the two world wars. In France, capital worth nearly a year of NI was destroyed between the two World Wars. Ultimately, the decline in the capital/income ratio between 1913 and 1950 was the history

of Europe's suicide and in particular, euthanasia of European capitalists. The US fortunes were also buffeted by the crisis of 1914-1945. Public debt rose sharply due to the cost of waging war. Under Franklin D Roosevelt, USA adopted policies designed to reduce the influence of private capital, such as rent control. To reduce inequality (than to eradicate private property), progressive taxation was adopted in the US. Confidence in the stock markets had been shaken by the Great Depression. There was also a fall in national savings.

46. The decline of foreign capital in Britain and France stemmed in part from expropriations due to revolution and the process of decolonization and the nationalization of the Suez Canal by Nasser in 1956. The British and French shareholders owned the canal and had been collecting dividends and royalties on it since 1869. Income of wealthy people dwindled considerably and private savings were therefore low. Some people consequently chose to maintain their standard of living by gradually selling off part of their capital.

47. But in 1970s to 2000s, rebound in the capital/ income ratio took place.

48. The USA had very limited foreign capital (negative in 1913 and 10% of national income on the eve of World War I) because the US, the first colonized territory to have achieved independence, never became a colonial power itself. What US citizens owned in the rest of the world was less than what foreigners, mainly British, owned in the US. Between 1980 and 2000, the US had accumulated a trade deficit. However, due to confidence in the USD, US investments abroad continued to yield a far better return.

49. According to the data collected primarily by **Fogel (2003)** and others, the market value of slaves represented nearly a year and a half of US NI in the late 18th and first half of 19th century, which is roughly equal to the total value of farmland. Piketty writes that Thomas Jefferson owned more than just land. He also owned more than 600 slaves, mostly inherited from his father and father-in-law. The slave economy was growing rapidly when the Civil War broke out in 1861, leading ultimately to the abolition of slavery in 1865. In 1800, slaves represented nearly 20 per cent (one million out of total population of 5 million). By 1860, the proportion of slave population had fallen to 15 per cent (4 million slaves in a total population of 30 million). The US, on the one hand, is a country of egalitarian promise, a land of opportunity for millions of immigrants of modest background and on the other, it is a land of extremely brutal inequality, especially in relation to race, whose effects are still quite visible. Southern blacks were deprived of civil rights until the 1960s. In the British Empire, slavery was abolished in 1833-38. In the French Empire, it was abolished in two stages (first abolished in 1792, restored by Napoleon in 1803, abolished definitely in 1848).

50. Average productivity of slaves was slightly below the average productivity of free labour and the rate of return on slave capital was generally closer to 7 or 8 per cent. In 1860, the average price of a male slave of prime working age was roughly 2,000 USD. The price of a slave varied widely depending on various characteristics. Beautiful Broomhilda was sold only for700 USD but best fighting slaves for 12,000 USD.

51. The size of inherited properties plays an important role in deciding the structure of inequality.

52. The ratio of private capital in the NI of US, Japan, Germany, France, Britain, Italy, Canada and Australia (eight richest countries in the order of decreasing GDP)

has increased from three in 1970 to six in 2010.

53. The prices of real estate and financial assets are volatile. That is why speculative bubbles in real estate and stocks have existed. Examples are: Japanese bubble in 1990 and Internet bubble in 2000-2001.

54. During the 1980s, the value of private wealth shot up in all the eight countries under study from 4 years of NI to 7 years of NI. This is mainly because of (a) high rate of savings and (b) gradual privatization and transfer of public wealth into private hands in the 1970s and 1980s. Political context was also more favorable to private wealth.

55. Instead of paying taxes to balance the government's budget, the Italians lent money to the government by buying government bonds or public assets, which increased their private wealth without increasing the national wealth.

56. **Tobin's Q** (market value X 100 / book value) varied from barely 20 per cent to more than 340 per cent for French firms listed in 2012. Tobin's Q rapidly fell toward one, when the internet bubble burst in 2001-2001 and during the financial crisis of 2008-2009.

57. Indeed, one characteristic of today's financial globalization is that every country is to a large extent owned by other countries, which not only distorts perceptions of the global distribution of wealth but also represents an important vulnerability for smaller countries as well as a source of instability in the global distribution of net positions. The 1970s and 1980s witnessed an extensive "financialization" of the global economy, which altered the structure of wealth in the sense that *the total amount of financial assets and liabilities held by various sectors increased more rapidly than net wealth. By 2010, this financial wealth has increased to 10-15 years of NI in the US, Japan, Germany and France.*

58. The evolution of a country's net foreign asset position is determined not only by the accumulation of trade surpluses or deficits but also by very large variations in the return on the country's financial assets and liabilities. These international positions are in substantial part the result of fictitious financial flows, associated not with the needs of the real economy but rather with tax optimization strategies and regulatory arbitrage (using screen corporations set up in countries where the tax structure and/or regulatory environment is attractive). Tax havens play an important role in this business.

59. In the 18^{th} century, the value of farmland in France and Britain attained the equivalent of four years of NI. According to contemporary estimates, investments and improvements represented at least three-quarters of this value. The value of pure land represented at most one year of NI. The depreciation of land was quite small compared with that of modern business capital, which has to be repaired or replaced much more frequently. Large capital gains on real estate in some areas were largely compensated by capital losses in other areas, which became less attractive, such as smaller cities or decaying neighborhoods.

60. The long run capital/income ratio depends on the savings rate 's' and the growth rate 'g'. These two macro-social parameters themselves depend on millions of individual decisions, influenced by any number of social, economic, cultural, psychological, and demographic factors and may vary considerably from period to period and country to country.

61. The capital's share of income was on the order of 35 to 40 per cent in both Britain and France in the late 18^{th} century and

throughout the 19th, before falling to 20 to 25 per cent in the middle of the 20th century and then rising again to 25 to 30 per cent in late 20th and early 21st centuries.

62. The rate of return varies widely with the type of asset as well as with the size of individual fortunes (it is generally easier to obtain a good return if one begins with a large stock of capital) and this tends to amplify inequalities.

63. Thanks to the revolutionary concept of the 'limited liability corporation', a firm's accounts are clearly separate from the accounts of the individuals who supply the capital (who risk only the capital they have invested and not their personal fortunes).

64. Nonwage workers are mostly found in small business (merchants, craftsmen, restaurant workers, etc.) and in the professions (doctors, lawyers, etc.). On the books of the individually owned firms, it is generally impossible to distinguish the remuneration of capital. Hence the income of nonwage workers is 'mixed'.

65. In both France and Britain, the rents paid to landlords alone accounted for 20 per cent of NI in the 18th and early 19th centuries.

66. In both Britain and France, the pure return on capital had oscillated around a central value of four to five per cent a year. The value of capital asset was estimated to be equal to 20 to 25 years of the annual income yielded by that asset.

67. When all taxes are taken into account, the average tax rate on income from capital is currently around 30 per cent in most of the rich countries. This is the primary reason for the large gap between the pure economic return on capital and the return actually accruing to individual owners. Also, for individuals whose only capital is bank deposits, the return is negative because such balances yield no interest and are eaten away by inflation and taxes on interest.

68. Wealth in the rich countries is currently divided into two approximately equal parts: real estate and financial assets.

69. The annual rental value of housing, which accounts for half of total national wealth, is generally three to four per cent of the value of the property. But the returns on financial investments, which are the predominant asset in larger fortunes, are higher. Taken together, it is these kinds of investments, in real estate and financial assets, that account for the bulk of private wealth and this raises the average rate of return.

70. Inflation has real effects on wealth, the return on wealth, and the distribution of wealth. The transition from virtually zero inflation in the 19th century to two per cent inflation in late 20th and 21st centuries led to a slight decrease in the pure return on capital. It was remunerative to be a rentier in a regime of zero inflation whereas today's investor must spend more time reallocating his wealth among different asset categories in order to achieve the best investment strategy. Thus inflation primarily plays a definite role in redistributing wealth among those who have it. Rate of return on capital is also determined by technology and the size of capital stock (too much capital kills the return on capital).

71. Financial institutions and stock markets are often sources of chronic instability, waves of speculation and bubbles.

72. Capital's share of income increased in most rich countries between 1970 and 2010 to the extent that the capital/income ratio increased. This upward trend is consistent not only with an elasticity of substitution greater than one but also with an increase in capital's bargaining power vis-à-vis labour over the past few decades, which have seen

increased mobility of capital. This will continue to be the case in the future. No self-corrective mechanism exists to prevent a steady increase of the capital/income ratio, together with a steady rise in capital's share of national income.

73. Skill levels of human resource have increased markedly over the past two centuries. The stock of industrial, financial, and real estate capital has also increased enormously.

74. During the first half of 19th century, the lion's share of economic growth went to profits while wages stagnated. The main explanation for this was the exodus of labour from the countryside and into the cities, together with technological changes that increased the productivity of capital. Available historical data for France suggest a similar chronology.

75. The wage split went through three distinct phases since World War II, with a sharp rise in profits from 1945 to 1968, followed by a very pronounced drop in the share of profits from 1968 to 1983 and then a very rapid rise after 1983 leading to stabilization in the early 1990s.

76. The British parliamentary reports of the period from 1820 to 1860 (all read by Marx) documented the misery of wage workers, workplace accidents, deplorable health condition, and more generally, the rapacity of the workers of industrial capital. That is how the term, "the bourgeoisie digs its own grave" became the central mechanism of Marx's writings.

77. **Technology, like the market, has neither limits nor morality**. The evolution of technology has certainly increased the need for human skills and competence. But it has also increased the need for buildings, homes, offices, equipments of all kinds, patents, and so on. Hence the total value of all these forms of nonhuman capital (real estate, business, industrial and financial capitals) increased at a faster rate. Thus the macroeconomic importance of capital relative to labour did not decline and the deep structures of capital were not altered.

78. The two World Wars and the public policies that followed from them, delayed a central role in reducing inequalities in the 20th century. Inequality began to rise sharply again since 1970s and 1980s.

79. In the USA, the inherited capital had little influence in the 18th and 19th centuries, a situation that did not last long. In the southern states of the USA, where capital in the form of slaves and land predominated, inherited wealth mattered as much as it did in old Europe.

80. Inequality of income from capital may be greater than inequality of capital itself, if individuals with large fortunes somehow manage to obtain a higher return than those with modest fortunes.

81. In the case of unequal incomes from labour, the following factors need to be considered. They are supply of and demand for different skills; the state of educational system; rules and institutions that affect the operation of the labour market and the determination of wages. In the case of unequal incomes from capital, the most important process involves savings and investment behaviour, laws governing gift-giving and inheritance and the operation of real estate and financial markets.

82. The distribution of capital ownership (and income from capital) is always more concentrated than the distribution of income from labour. Upper 10 per cent of the wage earners receive 25 to 30 per cent of total labour income whereas the top 10 per cent of the capital income earners own more than 50 per cent of all wealth. The bottom 50 per cent of the wage earners receive a

significant share of total labour income whereas the bottom 50 per cent of the wealth owners own nothing at all. Inequalities with respect to labour usually seem mild and moderate whereas inequalities with respect to capital are always extreme.

83. Labour incomes would be highly unequal in the short run due to differences in wages and working hours and this inequality would diminish if measured over a long period. Hence a longer term perspective would be ideal for studying the true inequalities of opportunities and status.

84. The very high concentration of capital is explained mainly by the importance of inherited wealth and its cumulative effects. For example, it is easier to save if one inherits an apartment and does not have to pay rent.

85. In Scandinavian countries, income from labour was most equally distributed between 1970 and 1990, top 10 per cent of wage earners received about 20 per cent of total wage income and bottom 50 per cent received 35 per cent. In France, Germany and most European countries, wage inequality was average. The US is the most inegalitarian country where the top 10 per cent get 35 per cent of the total and the bottom 50 per cent get only 25 per cent. In most countries, women are significantly overrepresented in the bottom 50 per cent of earners. This kind of income distribution has by no means been painless. This would result in very desperate social and economic realities for different social groups.

86. In most European countries, including Britain, France, Germany and Italy, during 2010-11, the richest 10 per cent owned 60 per cent of national wealth. In France, according to the latest available data for 2010-11, the richest top 10 per cent commanded 62 per cent of total wealth while the poorest 50 per cent owned only four per cent. In the USA, the most recent survey for 2010-111 by the Federal Reserve indicates that the top 10 per cent owned 72 per cent of America's wealth while the bottom half claimed just two per cent.

87. Everyone in the top decile owned his/her own home. In the top centile, financial and business assets predominated over real estate.

88. High level of total income inequality is the result of a "hyper-meritocratic society", or society of superstars, super-managers. There is nothing to prevent the children of super-managers from becoming rentiers.

89. Capital gains in the US reached unprecedented heights during the internet bubble in 2000 and again in 2007.

90. The growth of true "patrimonial (or propertied) middle class" was the principal structural transformation of the distribution of wealth in the developed countries in the 20th century.

91. Concentration of capital is a necessary condition for societies based on accumulated and inherited wealth.

6. Comments

As the author himself claims (Piketty, 2014, p.158), the novelty of the study is that it is the first attempt to place the question of the capital-labour split and the recent increase of capital's share of NI in a broader historical context by focusing on the evolution of the capital/income ratio from the eighteenth century until now.

Piketty (p.517) says, "capital tax I am proposing is a progressing annual tax on global wealth. The largest fortunes are to be taxed more heavily…" Global Progressive Taxation on capital (0.1 per cent to two per cent for above 5 million corporate revenue) is suggested by Piketty. He (pp.521-524) suggests a system that automatically transmits banking information to public tax authorities. But the question is: is it possible in practice now, when richest people design economic policies? The correct answer would be 'no'. That is why Piketty's remedies for the inequalities appear to be naïve.

Piketty observes that the internet is today highly controlled by capitalist corporations that exploit the digital labour of users. An alternative internet is urgently required and it requires an internet revolution. Google, Facebook and other large online media companies hardly pay taxes in many countries. But who will bell the cat? Is it possible to have anti-capitalist internet?

Piketty's position is difficult to be understood when he says that he does not want to abolish capitalism but to regulate capitalism (p.518), to stop the infinite increase of inequality of wealth (p.518) and to establish control of capitalism (p.532).

Piketty has introduced a new term, namely, "**patrimonial capitalism**", meaning the inheritance-based capitalism. This is in addition to "**casino capitalism"** and **"crony capitalism**". He agrees that 'patrimonial capitalism' is not exactly the same as a century ago. He shows the dangers of an inheritance-based system which favours those who do not need to work for their sustenance. He also criticizes the concepts of 'human capital' (the idea of Gary S Becker) and 'life cycle theory' of Franco Modigliani.

Regarding the information about the tax-paying (and not paying the tax) population, Piketty raises very pertinent question: Whether the highest tax-filers are really the richest people? He appears to say no to this question.

Piketty insists rightly on the use of empirical and historical methods instead of sterile model building.

This book would be useful to those who are interested in tracing the development path of the world in general and some developed countries in particular. It is directed not only to economists but also to general literate readers. All those who are interested in understanding the global economy would certainly enjoy reading this book at home.

7. Conclusion

The Book under review has clearly shown the predominance of capital in the contours of development. That is the reason why now in the globalization era, capital flow across the borders of the countries has been made easier. On the other hand, the complementary or sometimes substitute factor, namely, labour does not enjoy so much attention of the global policy makers. This kind of unequal treatments for capital and labour is the major cause for the widening economic inequalities. Without concentrating on the basic causes of problems and carefully avoiding them in the public debates and discussions, the economic, social and environmental imbalances can hardly be removed. With these imbalances, balanced, harmonious and sustainable economic and social development will only be a dream for long.

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